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ASSOCIATION OF CALCIUM AND PHOSPHATE PRODUCT WITH AMPUTATION-FREE SURVIVAL IN CRITICAL LIMB ISCHEMIA WITH MODERATE TO SEVERE CHRONIC KIDNEY DISEASE

Poster Contributions
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Background: Critical limb ischemia (CLI) has a high major amputation rate and mortality due to advanced systemic atherosclerotic disease. Patients with chronic kidney disease (CKD) have abnormalities of calcium-phosphate homeostasis and these abnormalities were reported to have a role in pathogenesis of atherosclerosis. The associations of CaP product with adverse events in CLI patients are unknown. The aim of this study was to assess the association between the calcium and phosphate (CaP) product and adverse events in CLI with moderate to severe CKD.

Methods: From March 2009 to March 2013, 81 CLI patients were treated at our hospital. Twenty patients were excluded because they had no moderate or severe CKD. The remaining 61 patients were retrospectively analyzed. The primary endpoint was amputation-free survival (AFS) at 1-year.

Results: One-year follow-up was completed in 60 patients (98%). Patient age was 68±11 years, with 74% diabetics and 87% on dialysis. AFS at 1-year was 65.5% and age, bedridden and CaP product > 55 were independent predictor for AFS in univariate analysis. After adjustment for age, CaP product >55 was related to worse AFS (HR: 4.95, 95% CI: 2.05-11.95, p<0.001). In Kaplan-Meier analysis, AFS was significantly better in patients with CaP product ≤55 compared to those with CaP product >55 at 1-year (76.5% vs. 28.6%, p <0.001).

Conclusion: High level of CaP product affected poor AFS in CLI with moderate to severe CKD. This result will be helpful for better management of CLI.